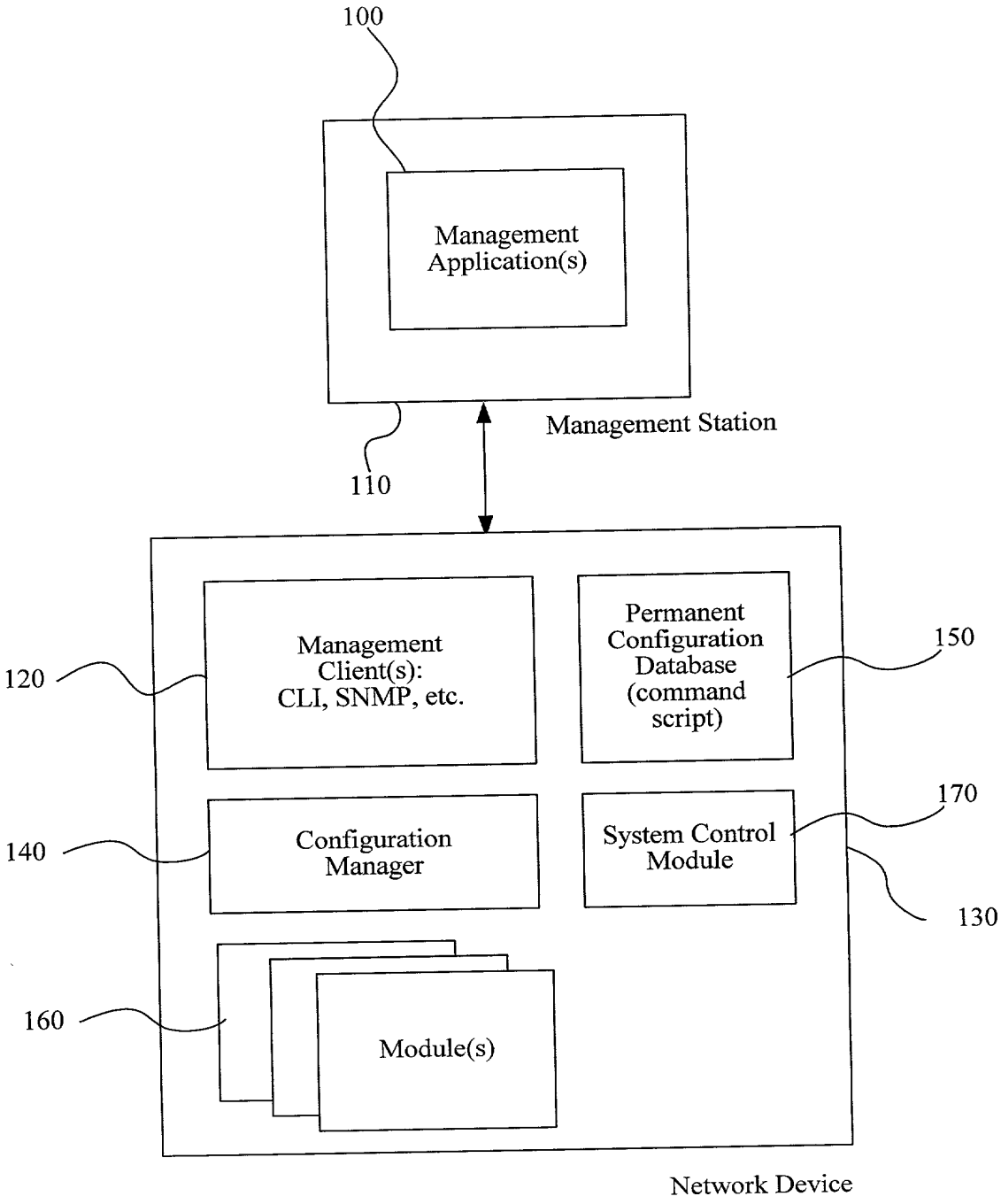

100
Management Application(s)
Management Station
110
120
Management Client(s): CLI, SNMP, etc.
Permanent Configuration Database (command script)
150
140
Configuration Manager
System Control Module
170
130
160
Module(s)
Network Device

FIG. 1

Figure 2

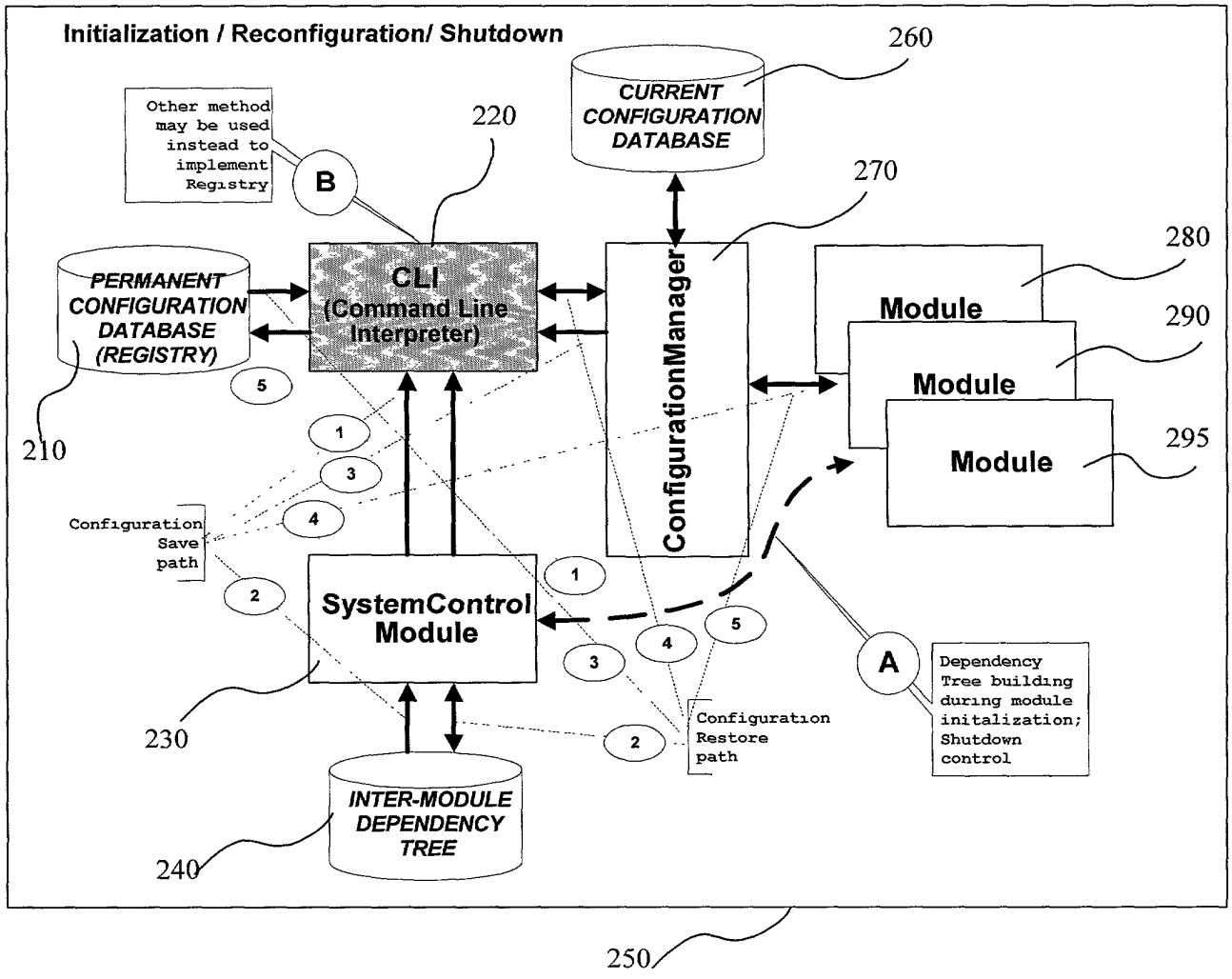

Initialization / Reconfiguration/ Shutdown
260
CURRENT CONFIGURATION DATABASE
Other method may be used instead to implement Registry
B
220
270
280
PERMANENT CONFIGURATION DATABASE (REGISTRY)
CLI (Command Line Interpreter)
ConfigurationManager
Module
290
Module
Module
295
210
5
1
3
4
Configuration Save path
2
SystemControl Module
1
5
4
3
2
A
Dependency Tree building during module initalization; Shutdown control
Configuration Restore path
230
INTER-MODULE DEPENDENCY TREE
240
250

Figure 3

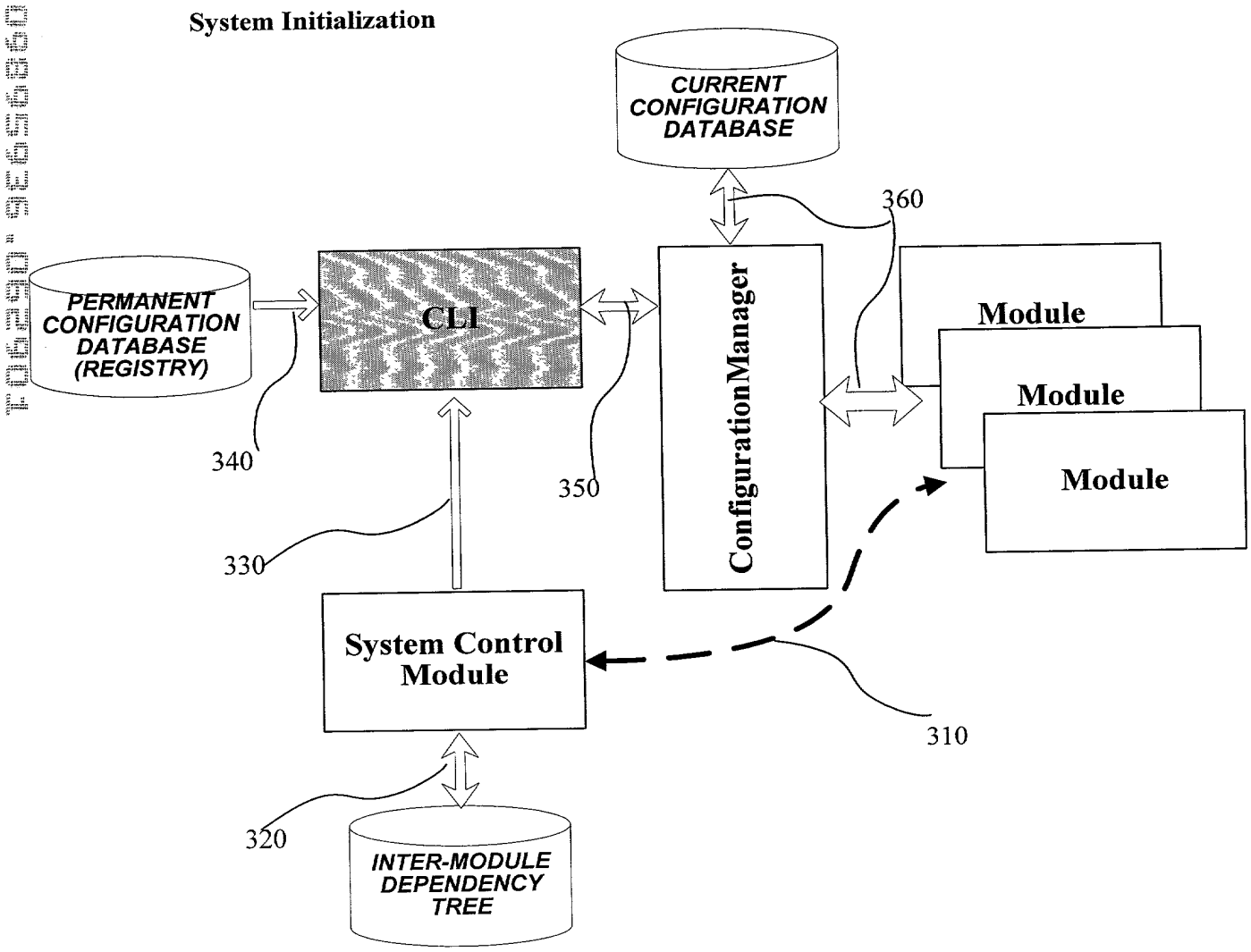

System Initialization
CURRENT CONFIGURATION DATABASE
360
PERMANENT CONFIGURATION DATABASE (REGISTRY)
CLI
ConfigurationManager
Module
Module
Module
340
350
330
System Control Module
310
320
INTER-MODULE DEPENDENCY TREE

Figure 4

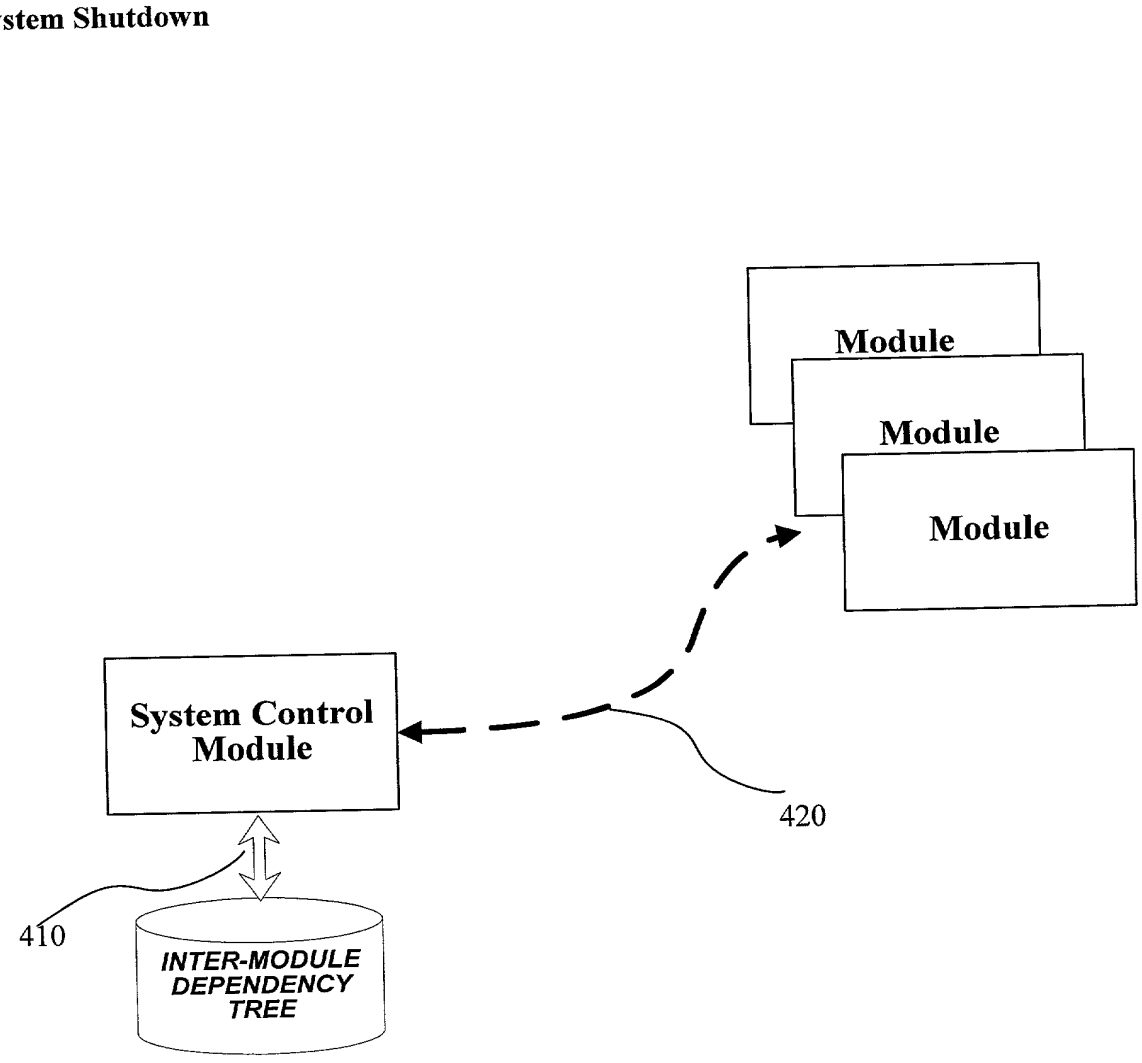

System Shutdown
Module
Module
Module
System Control Module
420
410
INTER-MODULE DEPENDENCY TREE

Figure 5

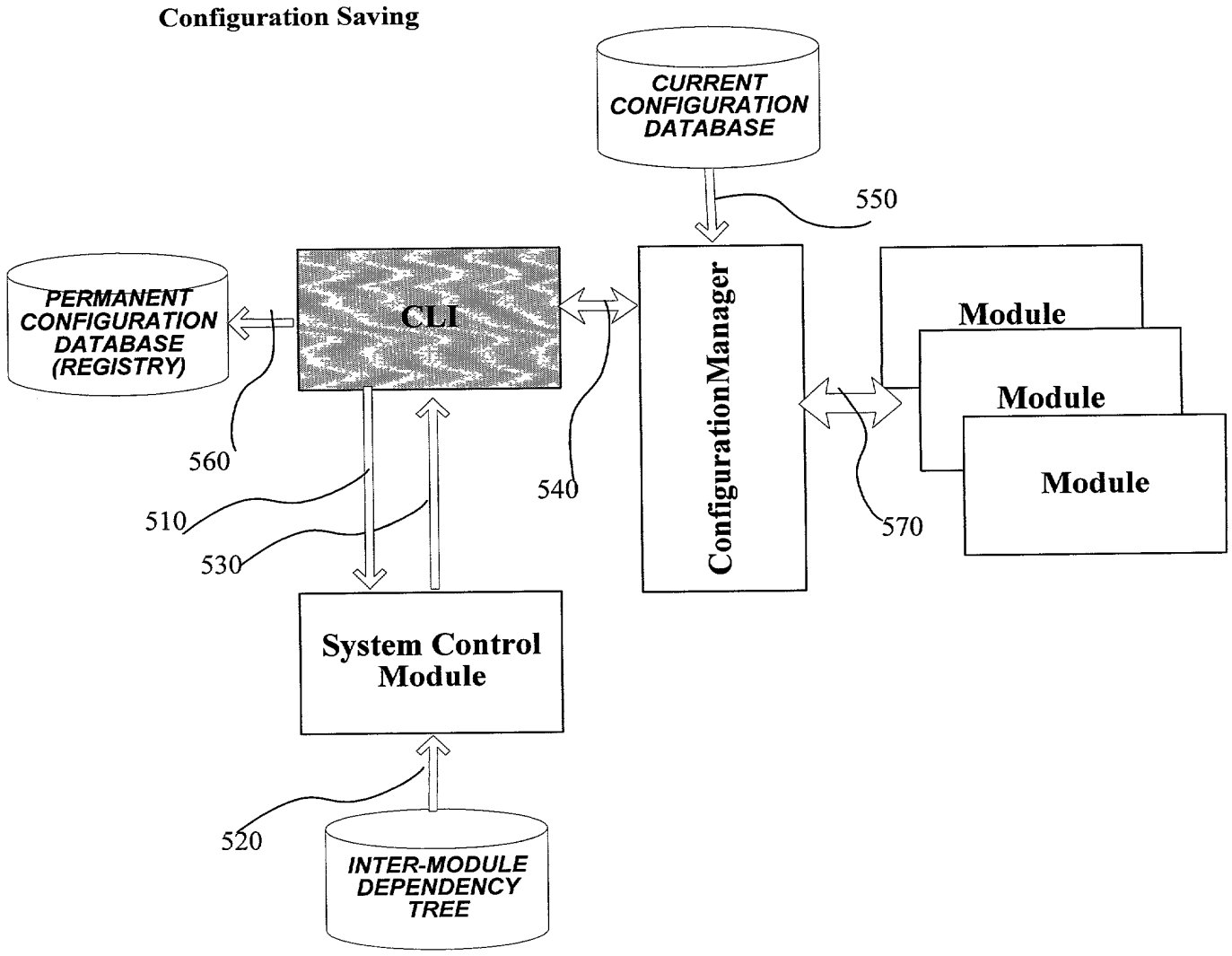

Configuration Saving
CURRENT CONFIGURATION DATABASE
550
PERMANENT CONFIGURATION DATABASE (REGISTRY)
CLI
ConfigurationManager
Module
Module
Module
560
510
530
540
570
System Control Module
520
INTER-MODULE DEPENDENCY TREE

Figure 6

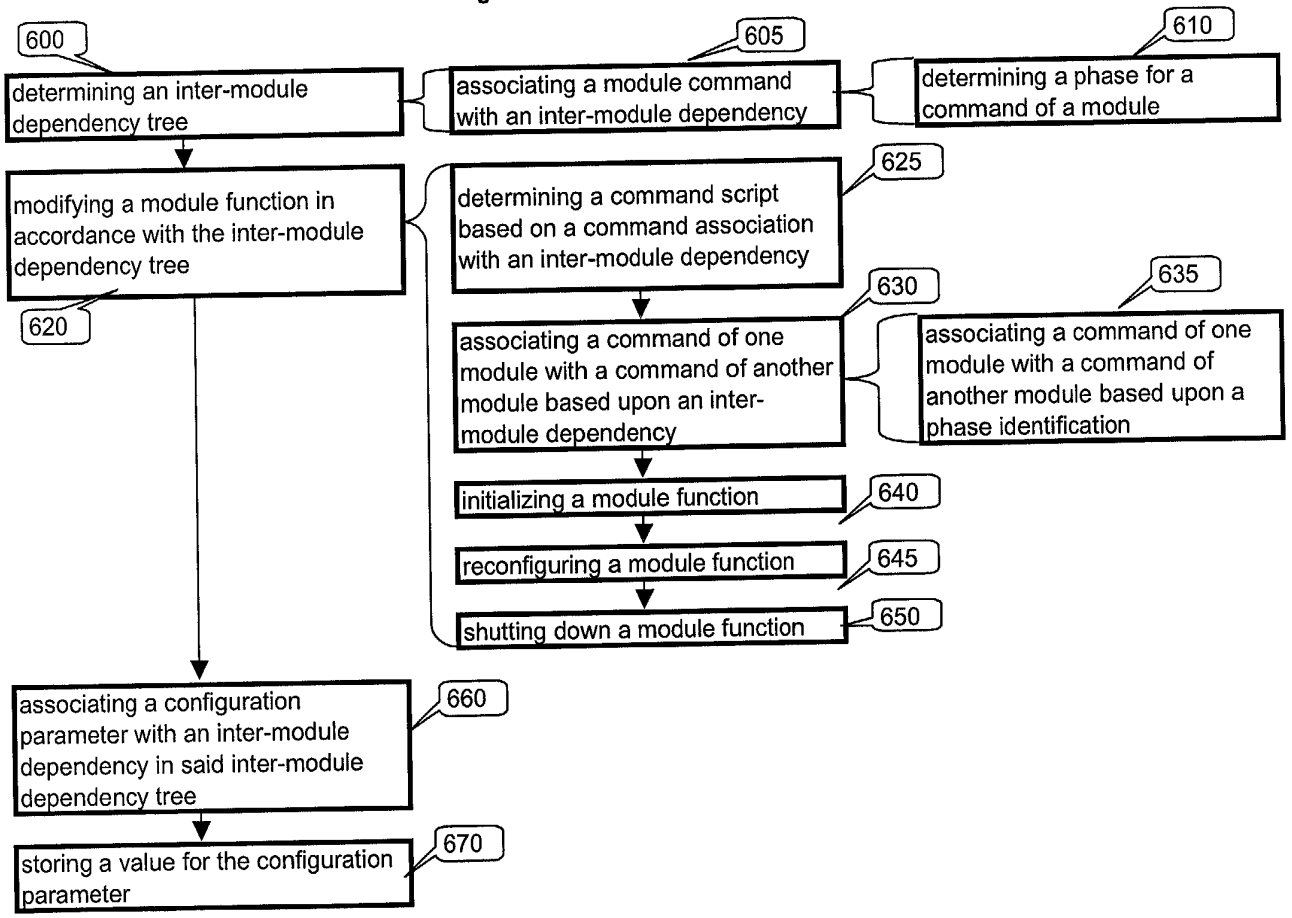
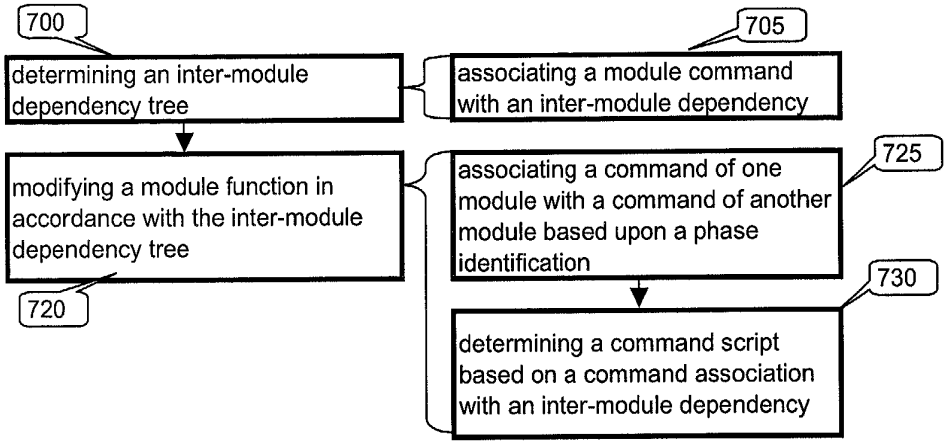

600
determining an inter-module dependency tree
605
associating a module command with an inter-module dependency
610
determining a phase for a command of a module
modifying a module function in accordance with the inter-module dependency tree
620
625
determining a command script based on a command association with an inter-module dependency
630
associating a command of one module with a command of another module based upon an inter-module dependency
635
associating a command of one module with a command of another module based upon a phase identification
initializing a module function
640
reconfiguring a module function
645
shutting down a module function
650
associating a configuration parameter with an inter-module dependency in said inter-module dependency tree
660
storing a value for the configuration parameter
670

Figure 7


700
determining an inter-module dependency tree
705
associating a module command with an inter-module dependency
modifying a module function in accordance with the inter-module dependency tree
720
associating a command of one module with a command of another module based upon a phase identification
725
730
determining a command script based on a command association with an inter-module dependency

TD6290 "96596860

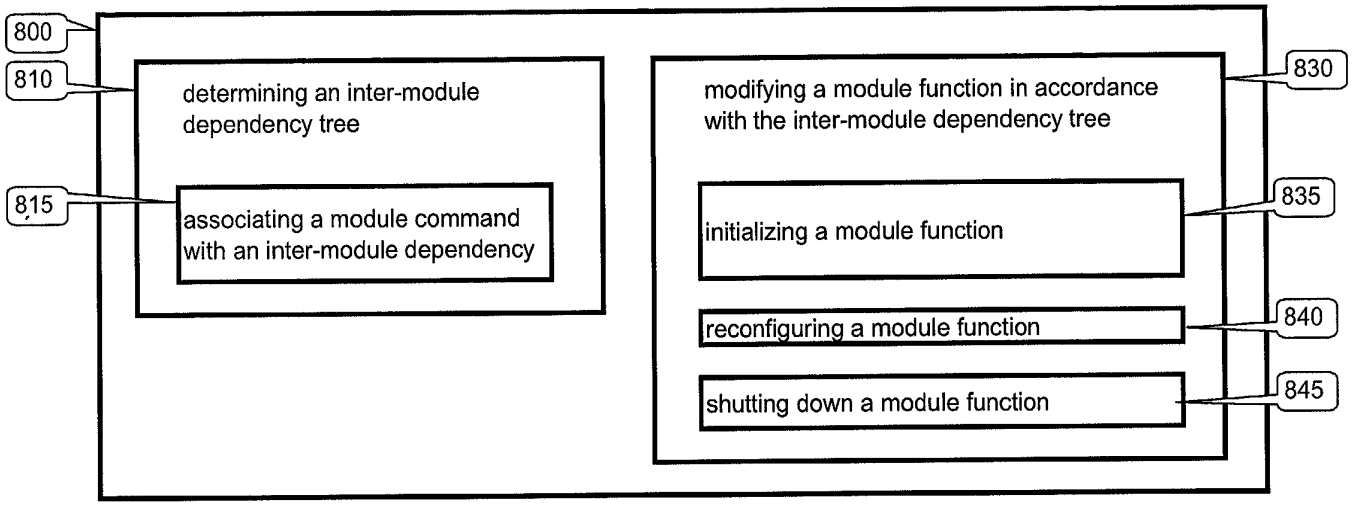



Figure 8